



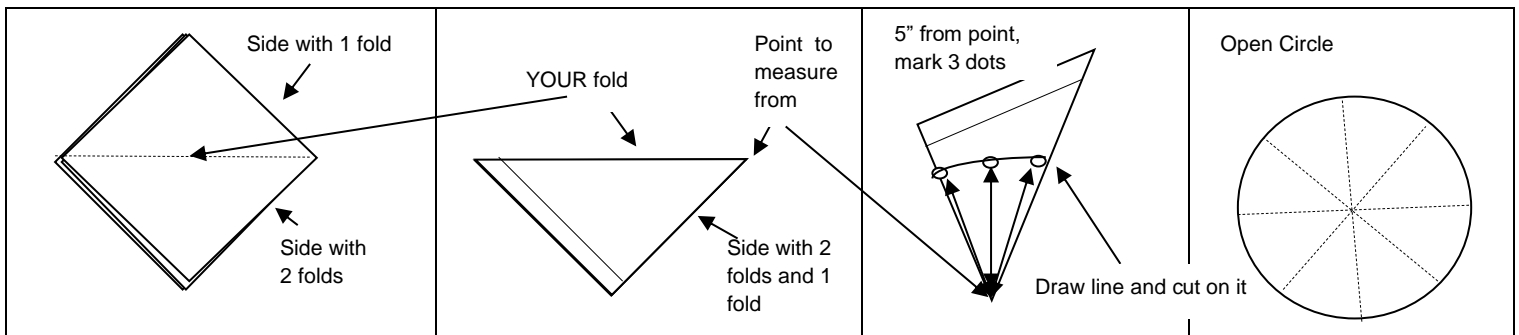
Supplies needed:

- one thin paper napkin for each cylinder/seed packet
- school glue (must be water-soluble)
- set of seed packets (1 packet per cylinder; 1 for every 2 students)
- copies of planting charts and list of vegetables
- pencils
- scissors
- rulers
- journal page for each student

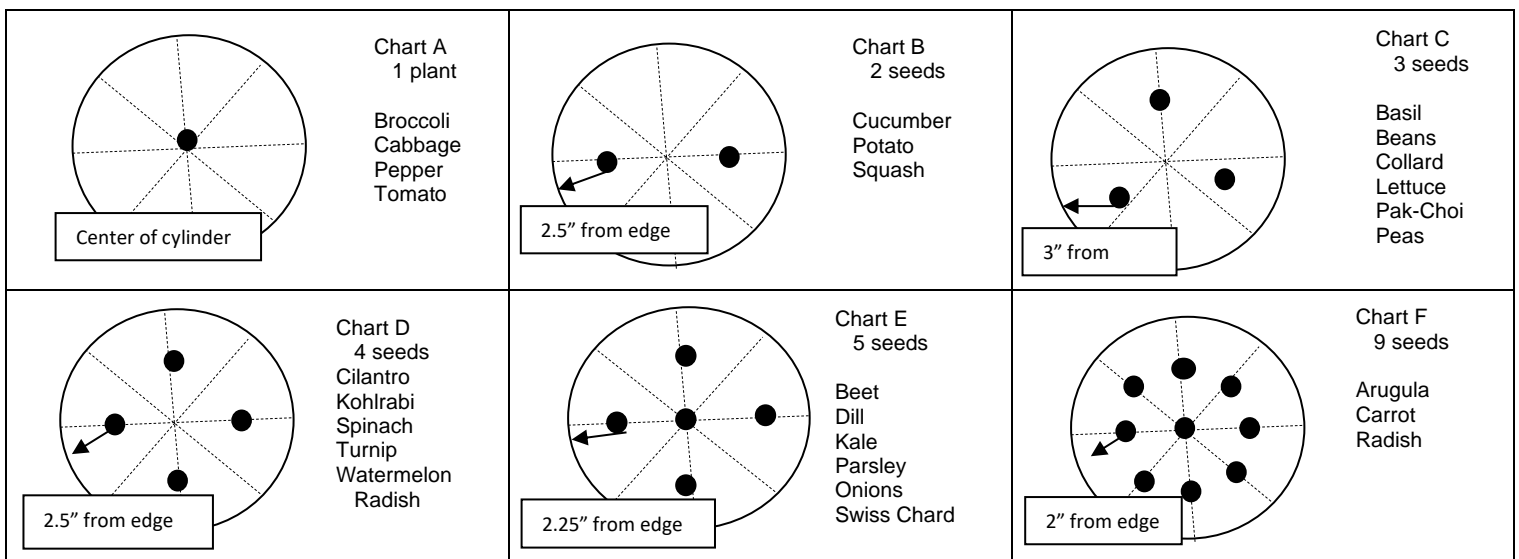
Remind students that making the paper napkins and following the planting charts will ensure that their seeds will be planted with just the right amount of space to grow into mature plants.

Hand out seeds, glue (can put small amount in plastic cups with stir sticks), scissors, and paper napkins to the students and instruct them to complete the following steps. IF you are short of time, the teacher could fold, measure and cut the napkins into the circles.

1. FOLD the napkin, so that the 2 sides with folds are together, making a point where the 2 folded sides meet.
2. Place your ruler in the center with the start of the ruler at the point. At 5", place a dot with your pencil. At each side, place a dot 5" from point.
3. Draw an arc joining the 3 dots.
4. Cut on the arc that you just drew. Now your folded paper napkin has a cone shape.
5. Open your paper napkin and it should be a circle. IF not, the napkin was not folded correctly and you will need to start over.
6. Write your name and your partner will write their name on your napkin or initials on the seed label inside the plastic bag.
7. Write the depth the seed should be planted, e.g. $\frac{1}{4}$ ", 1", etc. Then write the fraction of space each plant will need (e.g. Squash is 2 seeds, so each seed gets $\frac{1}{2}$ of the napkin; Radish is 9 seeds, which would be $\frac{1}{9}$).
8. Remember if you need an odd number, like Radishes (9), then the middle can count as 1 space and the other 8 seeds would be spread evenly around.
9. Put a dot of glue for each seed (can use a stir stick dipped into glue and touch napkin), then drop a seed onto each dot (works best to do 1 seed at a time). CAUTION: **Just a dot!** Do NOT push seed down into glue as the seed must not be covered with glue. One seed in each section as shown on the charts below for your specific vegetable. See Charts below for examples.
10. Glue the plant label from the seed bag onto the paper napkin (near edge away from seeds).
11. Let the glue dry. Move napkins from time to time until dry so they will not stick to the cabinet/table surface. This is very important!



Planting Charts



On Planting Day, have students take their paper napkins to the garden and follow these steps:

- Fill cylinders with potting soil almost to the top, leaving the appropriate amount of space for their seed (if they have a seed that needs to be planted 1" deep, they should fill, leaving a little less than 1" from the top of the cylinder).
- Add 3 tablespoons of fertilizer and mix in with hands or trowels.
- Gentle level soil with finger tips. Do NOT pat or push soil down.
- Wet the potting soil with part of the ½ gallon of water.
- Place napkin on top of wet soil.
- Cover with the appropriate amount of soil for their seed (lettuce, ¼"; squash, 1", etc). Check the chart below or the Vegetable Seed Information, Planting to Harvest guide for their seed.
- Add the remainder of their ½ gallon of water, pouring slowly to allow it to soak down.
- Continue watering every day, ½ gallon every day, for the first 2 weeks.
- After the first 2 weeks, water every other day. IF it rains, then don't water that day.

Discussion to have with students before they glue their seeds on their napkins.

In the classroom, provide each student with a copy of the Vegetable Seed Information chart. Point out those vegetables that will be planted in their garden. Have them use the chart as you guide the class through the discussion questions below:

- *Look at the column on your planting chart titled "Number of seeds per cylinder." Which vegetables should be planted with only 2 seeds per paper napkin?*
- *Which plant needs the least amount of space?*
- *How many seeds can be planted per paper napkin for radishes?*
- *What is special about how much space squash needs? A squash plant needs 24" across (diameter) for a single plant! This is why it is important to space cylinders 24" apart.*

Vegetable Planting Chart *

Seed	No. Seeds per Cylinder	Spacing Between Seeds	Chart	Planting Depth	Days to Emerge	Days to Harvest
Bean	3	5" - 6"	C	1.5"	5-10	50-70
Lettuce	3	5" - 6"	C	1/4"	6-8	50-60
Radish	9	1" - 2"	F	1/2"	3-6	28-35

* NOTE: These are only a few of the vegetables issued through our Cylinder Gardening program. When a school participates in the program, they will receive a complete list of vegetables and their planting information the "Vegetable Seed Information, Planting to Harvest" document.